

# C<sup>nth</sup>?: On the Strategic Potential of ESP

By Dr. Roger A. Beaumont

**I**NTEREST in the military potential of ESP—extrasensory perception—has grown in recent years. Some of it stems from the search for reliable and jamming-free modes of communication. A popular wave of interest in ESP stemmed from a boom in the occult and supernatural phenomena in the late 1960s and early 1970s, a time when ESP research in Eastern Europe and the Soviet Union also attracted popular attention. Claims of success in using ESP in military operations, however, appeared after the First World War<sup>1</sup>.

In spite of all such assertions, a basic question remains unanswered: does ESP actually work? While many have thought so—and think so—some scientists in the West have feared that the mounting fascination with ESP, in league with the resurgence in the occult and mysticism, threatens science itself. Moreover, such nagging doubt about psychic phenomena is

not evident in Eastern Europe and the Soviet Union. The Russians have long recognized that if ESP were an actual effect and could be harnessed, it would have great strategic potential.

Are such systems really possible? Many have thought so for some time<sup>2</sup>. In this respect, it may be useful to look closely at the differences in approach in ESP research in the West, on the one hand, and in the Soviet block countries on the other. In the latter, parapsychology is not considered to be a separate research discipline. Instead, articles on "biocommunications" (telepathy) appear in traditional scientific journals, salted in among what Western scientists view as orthodox research. The attention of many in the West was aroused in the 1970s, as Soviet authorities brought a heavy hand down on news coverage of ESP research in Russia<sup>3</sup>.

## Western Research

In the West, psychic research has long been tainted by sensationalism and some charlatanry. Since the late 19th century, many

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*Dr. Roger A. Beaumont is a professor of history at Texas A&M University and has authored more than 40 articles on military history and strategic studies, as well as three books.*

sought links with the supernatural through such means as Ouija boards and séances. The dramatic and the absurd overtones of the popular culture aspect of ESP has led even the more conservative elements of the popular press to treat ESP as a novelty. Also confusing is the fact that the various types of apparent ESP—telekinesis (the projection of force), telepathy (mental transmission), clairvoyance (the sensing of remote images) and precognition (foreknowledge)—have been lumped together as related phenomena. Major centers of ESP research in the West, at Utrecht, London and Duke University, have come under suspicion from many scientists. As a result, researchers like J. B. Rhine, recently deceased, have labored to prove an effect which the Soviets accept and attempt to explain—and control.

While the enfolding of "biocommunications" within their centralized research system may reflect Soviet concern that ESP drifts too close to religion, their closing of public access to ESP research might be a parallel to what happened in the United States and

Britain during World War II after work on an atomic bomb began<sup>4</sup>. When it was still visible, Russian research seemed to be trying to reconcile individual ESP experience with transmission and reception of low-peer low-frequency electromagnetic waves similar to the kind used to transmit radio, television and radar signals<sup>5</sup>. Much of the work on "biocommunications" dealt with the electrical dynamics of organisms, even back in the 1950s, when, in the United States, the idea that animals and plants and individual cells could be influenced by electromagnetic radiation other than heat was rejected in biological research.

### Soviet Research

Since the 1930s, biologists and parapsychologists in the Soviet Union have traced out in ever greater detail a telepathic transmitter-receiver ESP model, based on the concept that people with strong abilities as either transmitters or receivers can communicate by sending basic symbols or sensations (but not detailed or precise verbal thoughts or images) at great distance, thus, constituting a "cy-

bernetic system with all its properties"<sup>6</sup>—based on very-long-wave transmission. Nevertheless, the *Great Soviet Encyclopedia* (GSE) of 1974 states flatly in the article on "Parapsychology" that while ESP is a phenomenon, it is not related to a variant of long-wave electromagnetic transmission. Since the GSE is known to be a vehicle for official policy and is rather Orwellian in nature, the refutation, which contrasts with much extant in Soviet ESP research, is interesting.

While transmission of data over great distances by ESP was examined in the West from the 1920s on, it was rejected at first, since it was in violation of scientific laws which were believed to govern radio transmission and which decreed that there was a falling-off of power relative to the square of the distance between transmitter and receiver. Later, when unexpected long-range transmission of weak signals due to atmospheric effects was discovered, a theory of analogous enhancement and relay through psi-sensitive individuals of ESP "signals" came to the fore,<sup>7</sup> while other research pointed to the effects of electromagnetic radiation on the body<sup>8</sup>.

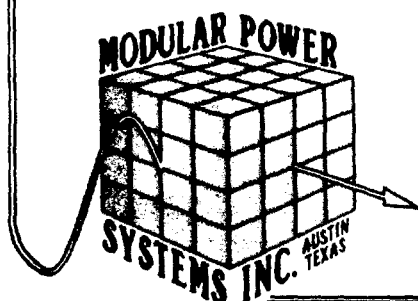
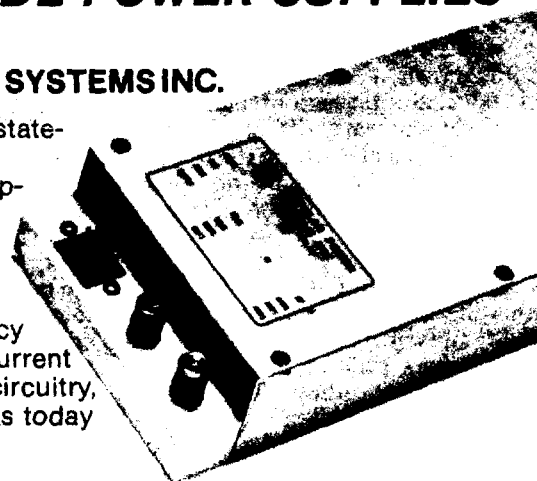
Research into the biological effects of electromagnetic waves is, of course, not an exclusive preserve of Soviet science. It has been known for almost a century, for example, that magnetic fields induce a sensation of light in the human eye, even in darkness<sup>9</sup>. In the late 1960s, a Russian-born American physicist noted magnetic resonance effects in matter containing particles with gyromagnetic properties, observing that "absorption of electromagnetic energy can cause transitions from lower to higher energy levels with resulting absorption of radiation and re-orientation of the dipoles."<sup>10</sup> Most recently, a British investigator reported a relationship between depth of hypnotic trance and the electrical resistance of the skin.<sup>11</sup>

While such evidence of overlap between parapsychology and biology, physics and chemistry falls short of the certainty needed for firm scientific conclusion, the uncertainty poses a problem for defense policy makers. It is especially frustrating, considering the history of ESP which is strewn with hoaxes and wishful thinking that even some scientifically-trained parapsychologists have drifted into misrepresentation and fudging, as desperate searches for conclusive results have led to a shaving of research rules. Discovery of such

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**"Perhaps ESP is a not-yet-understood sensitivity to subtle cues, or the brain function, as a computer processing information subconsciously. Perhaps those who are most sensitive "print out" slightly before or in parallel with distant events, thus appearing to be clairvoyant, but having actually calculated probabilities unconsciously from data gathered along the way—also unconsciously."**

hoaxes further discredits a field of investigation under suspicion. As John Beloff, a parapsychologist, has noted, ESP research has "... suffered from its fatal attraction for persons of unbalanced mind who seek in it their personal salvation. ..."<sup>12</sup>

Nevertheless, what is to be made out of the evidence that suggests the possibility that there may be something more solid lying behind it?<sup>13</sup> That question makes government funding of ESP-related research, at the worst, a ticking bomb and, at best, a quandary. Sponsoring such seemingly wild-eyed studies could well explode back in the face of sponsoring agencies, policymakers or researchers—but failure to follow leads might yield great advantages to those less skeptical.

Perhaps ESP is a not-yet-understood sensitivity to subtle cues, or the brain function, as computer processing information subconsciously. Perhaps those who are most sensitive "print out" slightly before or in parallel with distant events, thus appearing to be clairvoyant, but having actually calculated probabilities unconsciously from data gathered along the way—also unconsciously. Are such random coincidences noticed only under stress, as psychiatrist Carl Jung suggested in his theory of "synchronicity"? Or is there actually a lining up of electropotential forces in the brain at certain times, creating a low-power long-wave transmitter-receiver system of the kind suggested by Kogan?

### **Defense-related Research**

American defense analysts and policy makers seem to have been hedging their bets in this area for some time. Reports of U.S. defense-related ESP research have appeared fairly regularly in the public press over the last quarter of a century. In the 1950s, for example, news releases and popular features described the involvement of Westinghouse Laboratories and the Army Research Office in ESP research. Later, the names of

the Rand Corporation and the Institute for Defense Analyses cropped up occasionally. In the early 1960s, there were reports of telepathy between the submarine USS NAUTILUS and a shore-based command post—which was denied forthwith by the Navy.<sup>14</sup> In 1973, stories appeared describing CIA-sponsored probing of Soviet and Chinese secret installations by individuals with high *psi* ability.<sup>15</sup> By the mid-1970s, Stanford Research Institute appeared to be carrying the ball.<sup>16</sup>

From time to time, some indications of interest on the part of NASA emerged to public view. Following a call for an experiment in the course of the moonlanding programs in the late 1960s,<sup>17</sup> an astronaut, Captain Edgar Mitchell, conducted an experiment using star-cross-wave-square-circle *psi* cards developed at Duke University. In six sessions, he "transmitted" 25 card images at preset times, while "recipients" recorded their impressions. While the results exceeded statistical probability, they were not overwhelming.<sup>18</sup> NASA was quick to disclaim official sponsorship.

Other cases of NASA involvement included a communication project funded through Stanford Research Institute, which generated hostile reaction in some scientific circles, and a "previewing" of Jupiter by a well-known psychic researcher.<sup>19</sup>

Evidence of interest and research, however, does not necessarily mean serious acceptance or commitment to programs. James Dougherty pointed out how nations involved in disarmament talks may interject "jokers" or "riders" into otherwise serious and rational proposals to make sure that their opponents will not accept them. Those thus maneuvered into the role of rejectors may then seem in the eyes of technically unaware publics to be the foes of peace.<sup>20</sup> A corollary to this is the strategy of mounting shadow programs to draw an adversary's attention—the essence of Soviet efforts in the

field of "disinformation." If Soviet research in this area proved to be a spoof, the diversion of money and people to ESP could lead to the overlooking of other developments, as well as serving as a waste of effort.

Such cautions do not erase the tantalizing advantages to be gained in harnessing ESP. Given that such phenomena are based on an element of reality, the strategic use of ESP raises a further series of questions. Are the alignments of people or conditions only random or occasional? Is *psi* ability a by-product of surrounding electromagnetic radiations, or of solar radiation or induced by terrestrial magnetism? Is it enhanceable through hypnosis or drugs? Is there means for testing for *psi* ability? Or for developing it? Can it be jammed? Is the effect simply explainable in terms of a variation of radio-communications theory? Can "information bits," or code messages really be transmitted by sending combinations of basic sensory images? Is foreknowledge and remote-sensing possible? Is it group enhanceable?

### **ESP and C<sup>3</sup>**

In a parallel vein, the mounting interest in C<sup>3</sup>—command, control, communication—reflects concern about the complexities of war in what National Security Advisor Breszinski called the "nucleotronic age." The situation is made more critical not only by a rising curve of innovation but also by anxiety about Russian developments in this area. Contradictions in their published material do not produce much agreement among Western analysts about where the Soviets are going, but their lines of thought and unorthodox military problem-solving techniques are unique and sometimes strange.<sup>21</sup>

And so it is not clear at this point if both sides are really just playing with each other, or if there is something really developing in the realm of ESP. Spoofing, deception and camouflage are normal strategies in the conduct of war—and peace. If

ESP does work as a kind of long-wave radio, it could allow reliable, unjammable, unmonitorable communication with remote strategic weapons, especially the nuclear submarine force. Is there, then, some overlap between ELF—the extremely low-frequency radio system proposed by the Navy over the last 10 years under the titles *Sanguine* and *Seafarer*—and ESP?

The congruence of the Soviet model of ESP and the characteristics of ELF (Extremely Low Frequency) communication occur at several qualitative levels, from the simple aspect of hypothetical-theoretical overlap of transmission and reception, to the need for an unjammable and EMP-proof C<sup>3</sup> medium in post-nuclear exchange environment modes, from “broken-back war” fighting to conflict termination. One main hypothetical parallel is the problem of slow data rate, *a la* the age of signal flags and semaphores, and the early era of telegraphy and radio, a problem overcome with codebooks, and imagination. Unhappily, an effective ESP system would, depending on the nature of the phenomena, offer potential to the executor of a surprise attack, from the psychic influencing of targets, through precognition and remote sensing, to message transmission below the detection and countermeasure threshold of a potential victim.<sup>22</sup> Thus the anxiety born of the magnitudes of increase in threat and consequence of error tends to override rationalist skepticism.

### Threat Perception

Perception and interpretation of threat, after all, has been a growing problem in the age of machine warfare, a by-product of the rising speed and destructiveness of weapons. Since the 1950s and the coming of H-Bomb-tipped ICBMs, the nuclear super-powers have wired together elaborate networks of radar screens, electronic computers, radios, telephones and, more recently, satellites, fiber optics, fluidic computers and lasers. Articles in the Western popular press on the strategic potential of ESP began to appear in the late 1950s, as the first generation of inter-continental ballistic missiles cut nuclear surprise attack warning time from hours to minutes. Since then, such concern born of increasingly destructive nuclear power has been a driving force in shaping such “command and control” systems to function efficiently, systems which are designed as much to prevent war as to

fight. The anxiety has also been reinforced by the fact that the two nuclear superpowers are the nations which suffered the greatest strategic surprises of World War II, Operation BARBAROSSA, the Nazi assault on Russia, and Pearl Harbor, both in 1941, within six months of each other.

A principal problem in the realm of ESP stems from the dynamics of political power in an age in which “far-out” concepts have regularly become reality. Those who seek and hold political power often lack technical knowledge about the complex systems on which defense and foreign policy rely. Many modern leaders have come to be as dependent on their scientific advisors as ancient kings were on their shamans and soothsayers. The controversial influence of Dr. Lindemann (later Lord Cherwell) on Winston Churchill in the Second World War is still viewed as crucial, since Lindemann’s advice led to a major redirection of British bombing toward attacks on German civilians.

In the Nuclear Age, national leaders have often had science advisors act as translators of the arcane, even though the performance of such modern shamans has been uneven. Albert Speer, for example, overlooked the potential of nuclear research, and the influence of Lord Cherwell on Winston Churchill has long been under scrutiny by historians. In any case, science has yielded much of use in modern war, and, recently, as World War II secret files have been opened, the electronic warfare and decoding battles of that period, truly resemble, as Churchill said, a duel of magicians.

When looking at the current plight of policy makers in respect to ESP, then, it is sobering to recall that the vast atomic bomb project of World War II, undertaken in fear of parallel Nazi efforts, was based on an unproven hypothesis in a highly theoretical branch of science. Nevertheless, two days before Pearl Harbor, President Roosevelt committed vast and scarce resources to support the work of scientists who had no firm data in hand, to seek the exotic goal of loosing the electrical bonds of matter. As a result, what was literally science fiction until 1944 became brutal truth in 1945.

### Effects of Programs

The data at hand hardly suggest that the Manhattan project is in order. Any substantial program mounted in this area would

face hazardous paradoxes. If too much were spent, and produced a dead-end, the political result could be deadly. But if the potential were ignored, and an adversary succeeded in harnessing ESP, the result would be worse than embarrassment. If ESP can, indeed, be measured and controlled, whichever player in the game of international power mastered it might succeed without tipping their hand; it would be hard to keep sealed off. If the effect proved to be a variant in the phenomenon of extra-long wave communication, a whole sub-world of communications research would be opened up, not to mention the impact on geography, meteorology and psychometry.

The tendency for those who dwell in corridors of power to over-read threats is proverbial. In view of that, even suspicion that a foe was using ESP could generate turbulence in a system in times of stress or crisis. The uncertainty regarding the designs and motives behind Soviet interest in ESP also raises other questions. Is that interest merely a spoof, a form of “disinformation,” or are they really into pay-dirt and trying to cover up? Did they move their ESP research into their first-line scientific research establishment to conceal developments—or to heighten Western anxiety and uncertainty? Do they fear that the West may be active in this area—or even ahead?

Perhaps, in the end, all the interest and effort in this area will prove merely superstitious and wasteful. Or perhaps many have already glimpsed bits and fragments of an effect—or effects—which will someday be measured scientifically. For those looking out over this strange and blurred landscape, and trying to fit it into a context of policy, operations and technology, it is a very tough call, indeed.

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### Footnotes

<sup>1</sup>The Czechs, for instance, claimed the use of clairvoyance against the Hungarians in 1918 and in guerrilla warfare in World War II; Sheila Ostrander and Lynn Schroeder, *Psychic Discoveries Behind the Iron Curtain*, Englewood Cliffs, Prentice Hall, 1970, pp. 312-313; Peter Maddock, “Electromagnetic Induction of Psi States: The Way Forward in Parapsychology,” in *Mysteries*, Colin Wilson, New York, G. P. Putnam’s Sons, 1978, p. 632.

<sup>2</sup>In the 1920s, the British government reportedly funded development of a device to measure psychic emanations, Ian Stevenson, “The Uncomfortable Facts About Extra-Sensory Perception,” *Harper’s*, July 1959, pp. 20-25; The military theorist, J. F. C. Fuller, a student of the occult, made links between psychic power and generalship, *Annals*, John Tryhall, “Boney” Fuller: Soldier, Strategist and Writer, 1878-1966.

New Brunswick, Rutgers University Press, 1977.

<sup>3</sup>See Henry Gris and William Dick, *The New Soviet Psychic Discoveries*, Englewood Cliffs, Prentice Hall, 1978, pp. 286-287; R. A. McConnell, "Parapsychology in the USSR," *Journal of Parapsychology* (39:2), June 1976, pp. 129-134; Milan Ryzl, *Parapsychology: A Scientific Approach*; J. G. Pratt, "Soviet Research in Parapsychology" in *Handbook of Parapsychology*, Benjamin Woolman, ed., New York, Van Nostrand Reinhold, 1977; Alfred Douglas, *Extra-Sensory Perception: A Century of Psychic Research*, London, Victor Gollancz, p. 345. In 1974, it was announced that E. M. Naurov, a principal Soviet ESP investigator, had been jailed for two years on charges of having personally profited from his work and contacting foreigners, and, in 1977, Russian security police detained an American journalist for questioning who had tried to interview Soviet ESP researchers. Reports of Soviet VIPs seeking health treatment from a well-known medium have appeared in the West, e.g., see n.a., "Über Ihrem ein Leuchten," *Der Spiegel* (35:17), April 20, 1981, pp. 126-139.

<sup>4</sup>See Leslie Groves, *Now It Can Be Told: The Story of the Manhattan Project*, New York, Harper and Brothers, 1962, p. 146ff.

<sup>5</sup>See M. Ryzl, "Model of Parapsychological Communication," *Sdelovica Technika* (8), 1964, pp. 299-302, AD-466927, and I. M. Kogan, "The Information Theory Aspect of Telepathy," transl. F. J. Krieger, Rand Paper p. 41-45, 1969. For whatever reason, since Kogan's article appeared, listing of ESP-related research in US unclassified technical report indices has ceased.

<sup>6</sup>L. Vasiliev, *Studies in Mental Telepathy*, Moscow, Gospolitizdat, 1966. Joint Public Research Service Document No. 10702, p. 175.

<sup>7</sup>See Adrian Dobbs, "The Feasibility of a Physical Theory of ESP" in J. R. Smythies, *Science and ESP*, London, Routledge and Kegan Paul, 1971, pp. 230-254.

<sup>8</sup>A. S. Presman, "The Role of Electromagnetic Fields in the Processes of Vital Activity," *Biophysics*, 1964, p. 134, also see n.a., "Biofields: The Aura of Magic," *Washington Post*, July 20, 1978, Sec. K, p. 10.

<sup>9</sup>E.g., see Horace Barlow, Henry I. Kohn and E. Geoffrey Walsh, "Visual Sensations Aroused by Magnetic Fields," *American Journal of Physiology* (L48:2), Feb., 1947, pp. 372-375; Walter Sullivan, "Finger Tip Regrowth Starts a Study of Regenerating Nerves and Limbs," *New York Times*, Dec. 30, 1979, Sec. 1, pp. 1 & 18.

<sup>10</sup>Alexander Kolin, "Magnetic Fields in Biology," *Physics Today*, November, 1968, pp. 39-50. In the early 1970s, the use of very low level currents to aid in the healing of broken bones evolved from research on the electrical aspects of limb regrowth in lower order animals.

<sup>11</sup>C. Maxwell Cade and Ann P. Woodley-Hart, "The Measurement of Hypnosis and Auto-hypnosis by Determination of Electrical Skin Resistance," *Journal of the Society for Psychic Research* (76:748), June 1971, p. 99.

<sup>12</sup>For a brief critique and description, see Elizabeth Hall, *Possible Impossibilities*, Boston, Houghton-Mifflin, 1977, p. 161.

<sup>13</sup>See Stephan A. Schwartz, "Deep Quest," *Omni*, March 1979, p. 94ff.

<sup>14</sup>Gerald Messarie, "Le Secret du Nautilus," *Science et Vie*, No. 509, 1960, pp. 30-35, and n.a., "L'Armée Américaine étudie le 6 sens," *Science et Vie*, No. 508, 1960, p. 32.

<sup>15</sup>*New York Times Index*, 1973; and Bris and Dick, *New Soviet Psychic Discoveries*, Englewood Cliffs, Prentice Hall, 1978, p. 293. For a more recent perspective, see Ingo Swann, Banquet Address, "Proceedings of the 17th Annual U.S. Army Operations Research Symposium," Ft. Lee, VA, Defense Documentation Center #AD B 0362704, pp. 9-27.

<sup>16</sup>For evidence of a trend in the late 1970s, see

Ingo Swann, "The Threat of Possible Psychic Techniques in Future Conflicts," *Proceedings of the 17th Annual U.S. Army Operations Research Symposium*, 6-9 November 1978, Fort Lee, VA (DDC#AD B 036704); also see Dennis M. Ross, "Hypnosis as a Tool of Military Intelligence," *Military Intelligence* (4:3), July-September 1978, pp. 34-37; and John B. Alexander, "The New Mental Battlefield: 'Beam Me UP, Spock,'" *Military Review* (LY:12), December 1980, pp. 47-54.

<sup>17</sup>M. Ruderfer, "Note on the Effect of Distance in ESP," *Journal of the American Society for Psychological Research* (63:2), April, 1969, p. 201.

<sup>18</sup>N.a., "Space Experiment in ESP is Described," *New York Times*, February 23, 1971, p. 40.

<sup>19</sup>See Harold E. Puthoff and Russell Targ, "A

Perceptual Channel for Information Transfer Over Kilometer Distances: Historical Perspectives and Recent Research" in *Mind at Large: IEEE Symposium on the Nature of ESP*, ed. Charles T. Targ, Puthoff and Targ (New York: Praeger, 1979), pp. 13-76; n.a., "Techniques to Enhance Man/Machine Communication," Stanford Research Institute, July 1974, Final Report on NASA Project (NAS 7-100).

<sup>20</sup>James E. Dougherty, *How to Think About Arms Control and Disarmament*, New York, Crane and Russak, 1973, p. 52.

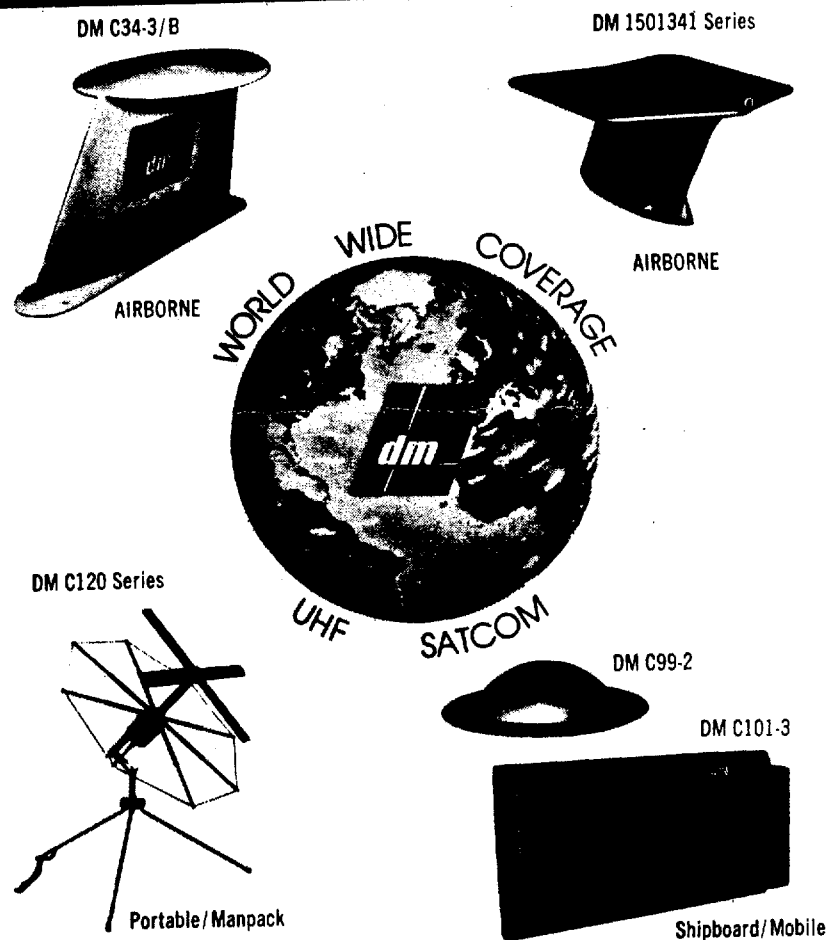
<sup>21</sup>E.g., V. V. Druzhinin and D. S. Kontorov, *Concept, Algorithm, Decision*, Washington, DC: U.S. Air Force, 1974.

<sup>22</sup>See Clinton Roche, "ELF and the SSN: Data Rate at Depth and Speed Today," *SIGNAL* (35:8), April 1981, pp. 29-32

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## The "Human Factor" in C<sup>3</sup>

To the Editor:

Stephen Andriole and Gerald Hopple's March 1982 article on "Decision Makers in C<sup>2</sup>" was very exciting reading. As a research manager in the behavioral sciences, I was pleased to see *SIGNAL* publish such an article because the article stressed orientation which I believe needs to be more broadly appreciated in the C<sup>2</sup> world. Namely, the authors showed the need to consider human information processing, cognitive styles, psychophysiological factors and belief systems, and put forth the notion that C<sup>2</sup> systems ought to be designed from the decision maker up rather than from electronic capabilities down. Essentially, they showed concerns for the "humanization of C" (p. 45). The authors also correctly pointed out that C<sup>2</sup> programs need an interdisciplinary approach and one which draws from both basic and applied (behavioral) research.

I attempted to achieve similar goals in a paper entitled "Individual Difference Dimensions as Human Factors Considerations in Tactical Communications Systems" which I presented at the Human Factors Association of Canada annual conference in October 1981. Starting with generic features of C<sup>3</sup> systems, I identified some major impacts of C<sup>3</sup> technology on decision makers: These impacts included:

- short decision response cycles because of the real time aspect of C<sup>3</sup> and the short life of information especially at the tactical level;
- crisis management as the norm in operations;
- decision makers' concerns over information accuracy and source reliability;
- decision makers' need to be open to technological innovation and organizational change.

Given the generic features of C<sup>3</sup> systems and their impacts on decision makers, numerous individual difference dimensions were proposed as useful in the selection and training of decision makers and in the design of C<sup>3</sup> systems. These dimensions include:

- **Personality**
  - tolerance of ambiguity
  - risk taking
  - anxiety/stress
  - dogmatism
  - evaluation apprehension
- **Cognitive Styles**
  - field dependance
  - systematic-heuristic
- **Attitudes**
  - toward innovation/change
  - toward high technology

I hope that more and more the "human factor" in its full connotation will be taken into account in the C<sup>3</sup> world.

*Robert Loo, Ph.D.  
Canadian Forces Personnel  
Applied Research Unit*

## Mental Communication

To The Editor:

Your article in the January 1982 issue of *SIGNAL* ("C<sup>nth</sup>? On the Strategic Potential of ESP," by Roger A. Beaumont, p. 39) was read by me with particular interest. My professional life has been occupied in electronic communication, the last 20 years, before retirement three years ago, as an electronic engineer at Ft. Monmouth, NJ.

As a member of the New Jersey Society of Parapsychology, I proposed that the U.S. Army fund a research effort in mental communication, or telepathy. I failed to convince lower echelons of management to send the proposal up to command authority.

I have personally participated in, and have witnessed experiments in, this activity. One of our members, Dr. Douglas Dean had traveled to an international symposium in Rus-

sia to observe parapsychology interests. He recounted his experiences to the membership. The Russians have trained receptor teams to receive telepathic messages. Intelligence, audio, video or thought energy is transmitted as individual pulses. By use of the teams each receptor contributes his fraction of the transmission to all the others. The integration forms a complete intelligence.

Dr. Dean, an adjunct professor at Newark College of Engineering (now New Jersey Institute of Technology) became Director of the Dream Institute at Mamoiades Hospital, New York City where he conducted thought transfer experiments with certified results published in scientific journals. The U.S. government granted \$25,000 to his activity. Professor Al Shukur, his co-experimenter, I believe, is still active in parapsychology at NJIT. The subject is offered in scores of universities.

It can be seen that my interest in your article is based upon my conviction of unquestioned realism of mental communication. Our government had a viable credence in parapsychology during World War I. Edgar Cayce, an internationally recognized psychic was assigned in an official role to General John Pershing and accompanied him on European missions. Hugh Lynn Cayce, his son, and Director of the Association for Research and Enlightenment, Virginia Beach, VA, has publicly stated his father's role and can be expected to repeat his own experiences in relation to his father in this matter.

In the early 1930s when I lived in the Boston area, the *Boston Herald* published in its Sunday magazine supplement, the results of its asking world famous scientists what they considered would be mankind's greatest achievement in the 20th century. Independently, six of the 10 replied that man's ability to communicate by thought process would be the event.

I advocate that the U.S. government seriously undertake research in mental communication. There are many young persons in this country who have natural ability and interest in this activity. Those pragmaticists who cite the lack of a scientific basis must be challenged and educated.

While the Indians were using smoke signals, radio was in the wings waiting to be discovered and developed. So, too, is mental communication waiting.

*Alfred J. Donovan*